

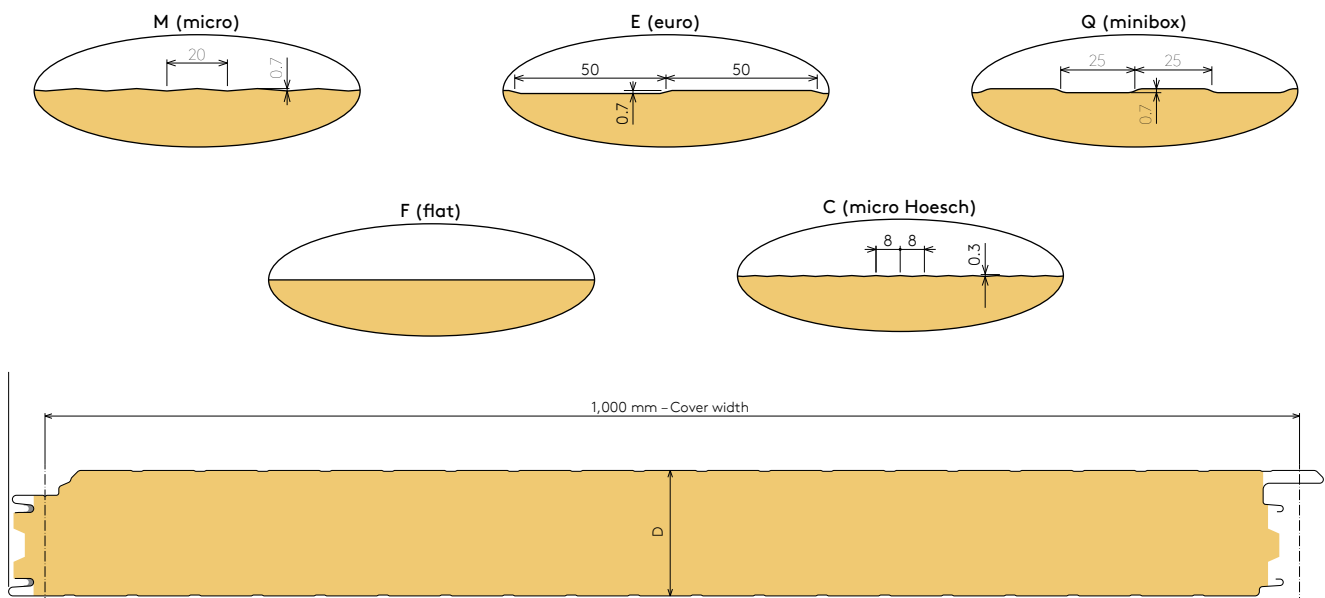
Application

The Hoesch® isorock vario wall element is a wall system with mineral wool insulation core and secret fixing. It can be used for all building types and implemented both horizontally and vertically. Our Hoesch® isorock vario sets new benchmarks for fire protection in façade design – and its style is inspiring. An extra plus in terms of attractiveness: The secret fixing and the identical external appearance of Hoesch® isorock vario can be combined with Hoesch isowand vario®.



Dimensions & dead load

External steel sheet profiling



Internal steel sheet profiling



| t_{nom1} [mm] | t_{nom2} [mm] | Element thickness (D) [mm] | | 80* | 100* | 120* | 140* | 150 | 175 | 200 |
|-----------------|-----------------|--------------------------------|---------|------|------|------|------|------|------|------|
| 0.75 | 0.50 | Dead load [kg/m ²] | Type S1 | 19.1 | 21.1 | 23.1 | 25.1 | 26.1 | 28.6 | 31.1 |
| | | | Type S2 | 21.8 | 24.5 | 27.2 | 29.9 | 31.2 | 34.6 | 37.9 |

* also possible in combination with Hoesch isowand vario®

Tolerances

All materials used comply with the technical regulations and standards. Tolerances comply with the tolerance specifications of DIN EN 14509 – annex D.

| Parameters | Dimension |
|--|---------------------------------|
| Element length (L) | |
| L ≤ 3 m | ±5 mm |
| L > 3 m | ±10 mm |
| Element width | |
| | ±2 mm |
| Element thickness (D) | |
| D ≤ 100 mm | ±2 mm |
| D > 100 mm | ±2 % |
| Perpendicularity of the cut edge s | |
| | ≤ 0.6 % of the element width |
| Lengthways and transverse camber | |
| Length | |
| | 2 mm/m, but not more than 20 mm |
| Width for flat profiles – h ≤ 10 mm | |
| | 8.5 mm/m |
| Width for other profile depths – h > 10 mm | |
| | 10 mm/m |

Delivery lengths

The standard delivery length is between 3.00 - 13.50 m (without additional costs). The maximum production length depends on the inquiry.

Technical regulations

We have been awarded the EU specific technical approvals and certifications for insulated sandwich elements (heat protection, bearing capacity, fire protection, sound proofing). For further information, please contact our specialist field service advisers.

Materials

Substrate

- Surface-treated steel with a Z275 zinc layer as per EN 10346 for the Polyester, Spectrum™, PVDF coating systems.

Steel sheet thicknesses

| | External (t _{nom1}) [mm] | Internal (t _{nom2}) [mm] |
|---------|---------------------------------------|---------------------------------------|
| Type S1 | 0,75 | 0,60 |
| | 0,50* | 0,50 |
| | 0,75 | 0,75 |
| | 0,75** | 0,50** |
| Type S2 | 0,50* | 0,50 |
| | 0,75 | 0,75 |
| | 0,75** | 0,50** |

* this steel sheet thickness is only possible with E and L profiles

** Standard steel sheet thickness

Organic coating systems – external steel sheets

1. Standard polyester – PES (standard)

Polyester is a universal, economical coating system characterised by good colour stability. The standard coating thickness is 25 µm.

2. Spectrum™ (standard)

Spectrum has a coating thickness of 50 µm and a slightly granular surface structure.

The system provides outstanding ageing and weathering resistance, excellent corrosion protection and UV-resistance as well as high colour and gloss stability.

High formability and outstanding resistance to mechanical damage round out the characteristics. Spectrum is free of chlorine, phthalates and softeners. It is 100% recyclable.

Organic coating systems – internal steel sheets

1. DU (KiD)

Polyester coating with a nominal coating thickness of approx. 15 µm. The standard colour shade is grey-white (similar to RAL 9002).

2. Standard polyester – PES

Polyester is a universal, economical coating system characterised by good colour stability. The standard coating thickness is 25 µm.

3. Foodsafe

150 µm thick, chemically inert polymer film coating for internal use in cold stores, food processing operations and buildings with heightened hygienic requirements.

The standard colour shade is grey-white.

Additional coating systems for the external and internal steel sheet are available upon request. For further information, please contact our specialist field service advisers.

Insulation core

Mineral wool insulation core with a high specific bulk density (≥ 100 kg/m³) for applications in areas with high fire protection requirements.

Sealing tapes

Factory-applied sealing tape

Longitudinally, Hoesch® isorock vario is fitted in the factory with a high-quality sealing tape that repels convection and condensation water.

Technical specifications

Insulation performance (as per EN 14509 incl. joint)

| Element thickness (D) [mm] | K-Roc® mineral wool | K-Roc® mineral wool |
|----------------------------|---------------------------------------|---------------------------------------|
| | Type S1 $\lambda_D = 0.043$ [W/mK] | Type S2 $\lambda_D = 0.047$ [W/mK] |
| | U [W/m²K] | U [W/m²K] |
| 80 | 0.53 | 0.60 |
| 100 | 0.42 | 0.47 |
| 120 | 0.35 | 0.39 |
| 140 | 0.30 | 0.34 |
| 150 | 0.28 | 0.31 |
| 175 | 0.24 | 0.27 |
| 200 | 0.21 | 0.24 |

U – thermal transition coefficient W/m²K

λ_D – thermal conductivity (after ageing) W/mK

Environmental sustainability

The elements provide no breeding grounds whatsoever for mould and rot. The insulation core has been made water-repellent.

Fire protection

In terms of fire behaviour and resistance, Hoesch® isorock has been tested according to national technical regulations and standards.

Fire behaviour:

Fire behaviour was classified as per EN 13501-1 into class A2-s1,d0 (all end applications).

Fire resistance:

You can find the current overview of fire resistance as per EN 13501-2 on the Internet at: www.hoesch-bau.com.

Sound insulation

| Element thickness (D) [mm] | Assessed sound dampening dimension R_w [dB] |
|----------------------------------|---|
| 80, 100, 120, 140, 150, 175, 200 | 32 |

Technical regulations

Hoesch® isorock vario fulfils the requirements of the European standard EN 14509:2013 Self-supporting double skin metal faced insulating panels - Factory made products - Specifications, and is generally approved in terms of construction supervision.

Quality

Our insulated roof and wall systems are manufactured from high-quality primary materials in state-of-the-art production facilities, under permanent quality control. They fulfil the requirements of ISO 9001:2015 and of EN ISO 50001:2012.

Warranty

On the basis of the actual application, we offer a project-related warranty on the organic coating of the external steel sheet.

Packaging & transport

In our production facilities, the elements are packed in such a way that they are undamaged after extended transport. The outsides are protected with polystyrene strips or scantlings, and the package is covered using wrapping film. The number of elements per package depends on the thickness and total length of the elements.

The values listed in the table are to be taken as guideline. The values are reduced for exceptionally long delivery lengths. The maximum package height is 1,100 mm. The values in the table relate to element lengths of 8 m.

The maximum weight is approx. 3,000 kg.

| Element thickness (D) [mm] | 80 | 100 | 120 | 140 | 150 | 175 | 200 |
|--------------------------------|----|-----|-----|-----|-----|-----|-----|
| Number of elements per package | 14 | 11 | 9 | 7 | 7 | 6 | 5 |

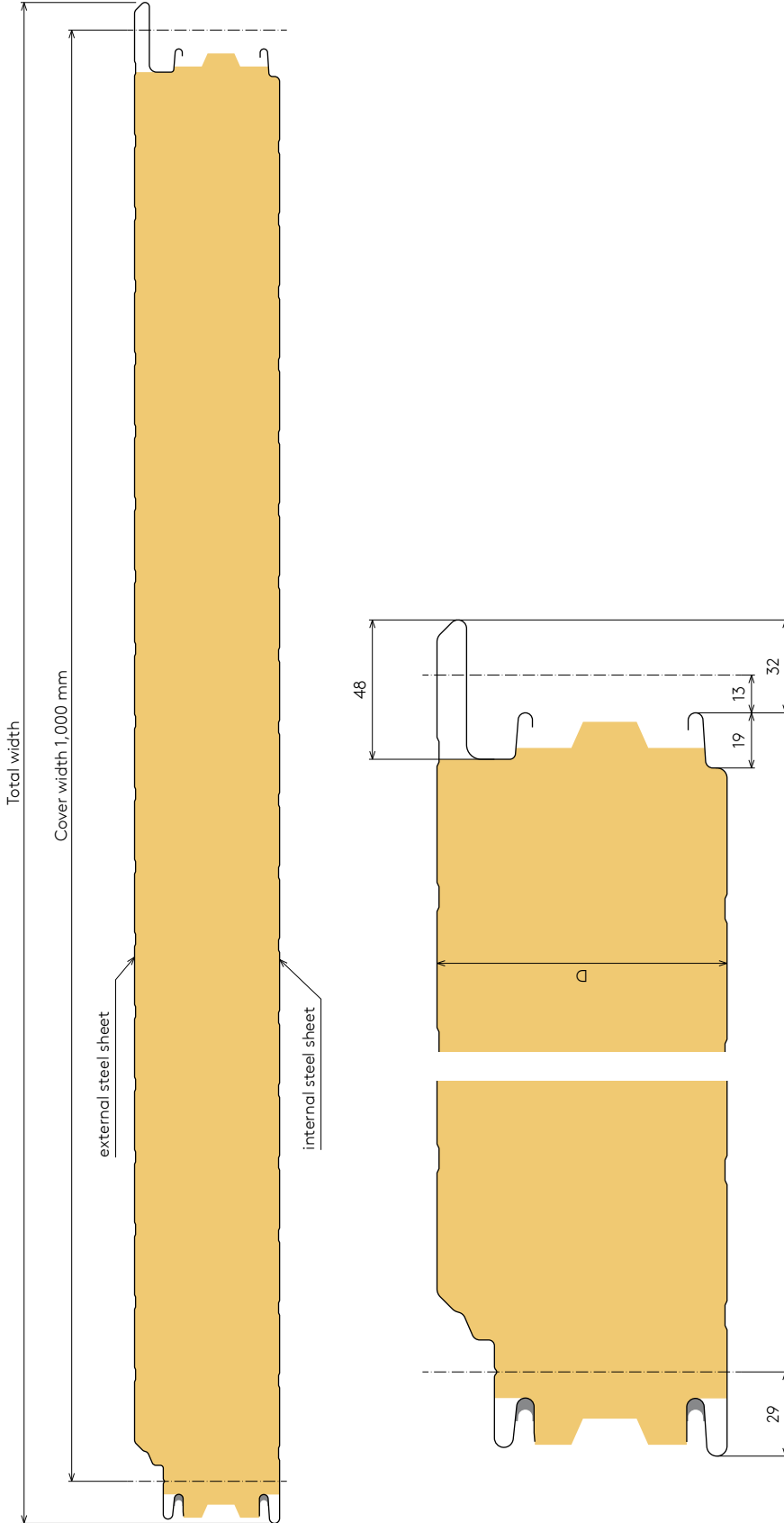
Delivery

Elements are delivered directly to the construction site using HGVs, unless something different is agreed. The customer or installer is responsible for unloading, and this must be ensured by the customer.

Installation

When laying the elements, the "Guideline for planning and implementing roof, wall, and ceiling constructions made from metal profiled sheeting" of the IFBS must be complied with.

The individual specifications in this datasheet are guaranteed properties only if they are expressly confirmed as such in writing in each specific case. Subject to technical changes.



Available element thicknesses

| Element thickness (D) [mm] | Total width [mm] |
|-------------------------------|------------------|
| 80 | |
| 100 | |
| 120 | |
| 140 | 1,048 |
| 150 | |
| 175 | |
| 200 | |